



# **Operational Handbook; PRIMAR ENC services**

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## **Operational Handbook for Distributor – PRIMAR ENC services**

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# 1 Introduction

The objective of this Operational Handbook is to define the distributor and user's responsibilities and work procedures to ensure the PRIMAR ENC services are delivered with high quality.

Some general product information and PRIMAR services information are described to be able to fully understand how the ENC services must be operated.

## 1.1 *PRIMAR ENC services – overview*

The following interfaces are available to access the PRIMAR ENC services:

- **PRIMAR ENC CD/permit service**
- **PRIMAR Online services**
  - **PRIMAR Online using PRIMAR Chart Catalogue**
  - **PRIMAR Online using e-mail notification**
  - **PRIMAR Online using ECDIS/ECS**
- **PRIMAR B2B services**
- **Pay As You Sail**

The distributor must determine which service/ENC update option to use based on administration, requirements and if the licensees fulfil the system prerequisites for using PRIMAR Online and ECDIS system for Remote Update.

## 1.2 *PRIMAR Web Chart Service*

PRIMAR web chart service uses the internet to deliver chart images derived from the content of updated ENC's made available by ENC providers.

This service generates an actual image of the geographic information, and sends it as images directly to the end user's mapping application. Any application or web browser supporting the web map service (WMS) standard can easily access and use the service.

The web chart service is not for navigation, but for viewing ENC's on web and in GIS applications without an ECDIS or ECS.

For more information and Web Chart licensee contact PRIMAR.

## **1.3 Content of the ENC services**

### **1.3.1 Service content**

- There is no limit on the organisation and relevant online users on the frequency, duration and connections to the PRIMAR ENC services
- All use of the ENC services by the distributor and users will be logged
- PRIMAR will distribute ENC permits in accordance with its current service policies
- PRIMAR will provide password tokens to distributors together with applicable user manuals and guides when a service is started

### **1.3.2 System prerequisites**

Distributor:

- Internet access
- Java 2 Runtime environment installed

Users of the PRIMAR Online service using PRIMAR Chart Catalogue as a client:

- Internet access
- Java 2 Runtime environment installed if using the PRIMAR Chart Catalogue and the PRIMAR Online ENC service

## **1.4 Application interface**

### **1.4.1 Distributor**

All distributors will be using the latest version of the PRIMAR Chart Catalogue. PRIMAR will inform when new editions are made available.

### **1.4.2 User**

Users of the PRIMAR Online service must also use the latest version of the PRIMAR Chart Catalogue. The distributor is responsible for informing their users about new releases.

Users of the Remote Update service will use an application provided by the OEM.

## **1.5 Service support**

### **E-mail**

ENC distribution - [sales@primar.org](mailto:sales@primar.org)

ENC quality and supply - [data@primar.org](mailto:data@primar.org)

ENC national services - [national@primar.org](mailto:national@primar.org)

General enquiries - [support@primar.org](mailto:support@primar.org)

### **Phone**

+47 51 93 95 00

## **2 General product information**

### **2.1 What is an ENC?**

ENC – Electronic Navigational Chart

An ENC is the official digital chart data authorised by national Hydrographic offices, in accordance with the S-57 ENC product specification from the International Hydrographic Organisation (IHO).

ENCs are designed PRIMARily for use on Electronic Chart Display and Information Systems (ECDIS).

In conjunction with the development of IMO (International Maritime Organisation) Performance Standards for ECDIS, the International Hydrographic Organization has developed technical standards related to:

- specifications for ECDIS content and display (S-52)
- the digital data format (S-57)
- data protection (S-63)

### **2.2 IHO Special Publication S-52**

This standard includes specifications for ECDIS content and display and appendixes describing the means/process for:

- Updating
- Colour and symbol specifications
- Glossary of ECDIS-related terms

### **2.3 IHO Special Publication S-57**

This standard includes a description of the:

- Digital data format
- Product specification for the production of ENC data
- An updating profile

**The IHO standards S-57 and S-52 are specified in the IMO Performance Standards for ECDIS.**

## **2.4 IHO Special Publication S-63**

The data protection standard includes a description of the:

- IHO recommended ENC security scheme
- Test data and test procedures for software developers
- Software kernel with source code for a reference implementation.

The publication “S-63—IHO Data Protection Scheme” describes the recommended standard for the protection of ENC information. It defines security constructs and operating procedures that must be followed to ensure that the data protection scheme is operated correctly and to provide specifications that allow participants to build compliant systems. The S-63 standard describes how ENC data are protected (encrypted and digitally signed) during the transmission from a data producer to a user system.

The Data Protection Scheme was prepared by the International Hydrographic Organization’s (IHO) Data Protection Scheme Working Group (DPSWG).

The S63 standard is based on the protection scheme developed and operated by PRIMAR and PRIMAR-Stavanger as part of providing their protected ENC service. The Electronic Chart Centre AS and United Kingdom Hydrographic Office were the original contributing organizations.

The Standard was adopted as the official IHO standard, by the IHO member states in December 2002 (IHO CL 66, 2002).

### **2.4.1 Roles**

- **Data protection scheme administrator (IHB)**  
Is responsible for monitoring and issuing security information to main operators of the security scheme.
- **Data servers (example of data servers HOs and RENC)**  
Are responsible for applying the ENC protection (encryption and digital signature) and issuing required Cell Permits (decryption keys) to all users of the data.
- **Data clients (users)**
- **Manufacturers (OEMs)**  
Is responsible to supply the user permit when the system is purchased
- **(Distributor)**

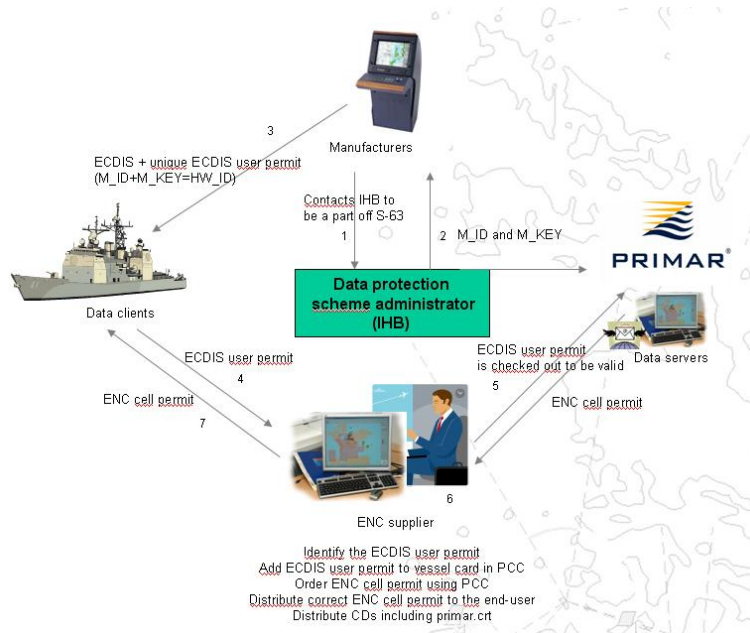
### **2.4.2 The process**

Data protection scheme administrator (IHB) provides the manufacturer with a unique manufacturer key and identification (M\_KEY and M\_ID).

The manufacturer must also provide a secure mechanism within their software systems for uniquely identifying each end user installation. The data protection scheme requires each installation to have a unique hardware identifier (HW\_ID). The Data Clients/Data Servers will use the unique system identification (M\_KEY and HW\_ID) to issue Cell Permits (decryption keys) to the end-user so he can access and decrypt his ENC data. Since the Cell Permits are issued uniquely for each installation, it also implies the Cell Permits can not be transferred and re-used among several users. Each user must apply the correct Cell Permit file to his system.

PRIMAR will generate the appropriate Cell Permit files and issue them to the distributor who is responsible for delivering them to the end-user. In the Online ENC service will the cell permit files be delivered directly to the end-user.

Each ENC file is digitally signed to enable the end-user system to confirm the file has been issued by PRIMAR. All ENC files (cells and updates) will have a corresponding signature file. The end-user system must have the PRIMAR public key (provided in the PRIMAR certificate file, ref chapter 3.2.3) installed to correctly authenticate the ENC files.



## 2.5 ENC product specification

In this chapter the S-57 Appendix B.1 ENC product specification is used as a source to describe an ENC and the ENC exchange set.

### 2.5.1 Navigational purposes

ENC data is compiled for a variety of navigational purposes. The following codes are used:

- 1 overview
- 2 general
- 3 coastal
- 4 approach



- 5 harbour
- 6 berthing

HOs may assign each ENC to a navigational purpose based on the ENC's compilation scale. This should be done in consultation with neighbouring HOs or with all nations within a RENC, or with all nations within a Regional Hydrographic Commission, in order to maintain consistency across national or regional boundaries. For instance, the following ranges may be applied:

Navigational Purpose	Name	Scale Range	Available Compilation Scales	Matching Scale Ranges
1	Overview	<1:1,499,999	3,000,000 and smaller 1,500,000	200 NM 96 NM
2	General	1:350,000 – 1:1,499,999	700,000 350,000	48 NM 24 NM
3	Coastal	1:90,000 – 1:349,999	180,000 90,000	12 NM 6 NM
4	Approach	1:22,000 – 1:89,999	45,000 22,000	3 NM 1.5 NM
5	Harbour	1:4000 – 1:21,999	12,000 8000 4000	0.75 NM 0.5 NM 0.25 NM
6	Berthing	> 1:4000	3999 and larger	< 0.25 NM

*Note that this correlation of navigational purposes to compilation scale is intended to give guidance to those HOs about to start ENC production or to those who wish to rescheme their ENC cells.*

#### **Compilation scale:**

May define the scale of the paper chart from which the data was digitized

Refer to chapter 2.5.3 for how navigational purpose is encoded in the ENC names.

## **2.5.2 Data sets**

#### **Definitions of data sets:**

##### **New data set**

No ENC data has previously been produced for this area and for the same navigational purpose.

##### **Update:**

An update is changing some information in an existing data set.

**Re-issue of a data set:**

Including all the updates applied to the original data set up to the date of the reissue. A re-issue does not contain any new information additional to that previously issued by updates.

**New edition of a data set:**

A new edition includes new information which has not been previously distributed by updates.

Each new data set, re-issue, or new edition is called a **base cell file**.

A data set containing updates to one base cell file is called an **update cell file**.

### 2.5.3 Data set file - naming

The data set files are named according to the specifications given below:

**CCPXXXXX.EEE**

|||  
|||----- EEE = update number  
||----- XXXXX = individual cell code  
|----- P = navigational purpose  
|----- CC = producer code

**The main part forms an eight character identifier where:**

- The first two characters identify the producer
- The third character indicates the navigational purpose
- The fourth to eighth characters are used for the cell code. This code can be used in any way by the producer to provide the unique file name. If characters other than numbers are used only uppercase letters are allowed.

### 2.5.4 Updating - file extension

Every new data set, re-issue or new edition must have a 000 extension.

For update cell files the extension is the number of the update, ranging from 001 to 999. These numbers must be used sequentially, without omission.

### 2.5.5 Edition number

When a data set is initially created, the edition number 1 is assigned to it. The edition number is increased by 1 at each new edition. Edition number remains the same for a re-issue.

### 2.5.6 Update number

Update number 0 is assigned to a new data set. The first update cell file associated with this new data set must have update number 1.

The update number must be increased by one for each consecutive update, until a new edition is released. The new edition must have update number 0.

A re-issue of a data set must have the update number of the last update applied to the data set. In the case of an update cell file the file extension is the same as the update number.

### 2.5.7 Directory structure ENC exchange set

The following directory structure is mandatory.

- On each volume within an exchange set there must be a root directory called ENC\_ROOT.
- The catalogue file for the exchange set must be in the ENC\_ROOT directory of the first volume of the exchange set.
- The ENC\_ROOT directory of the first volume may also contain a README file. Further directories and sub-directories may be defined under the root directory on any volume in the exchange set.

### 2.5.8 Volume naming

An exchange set may be split across several media volumes; therefore, each media volume must be uniquely identified within the exchange set. A file must not be split across volumes. Individual volumes must conform to the following naming convention: **VSSXNN**

#### Where:

**V** is the mandatory first character.

**SS** is the sequence number of the specific volume within the exchange set.

**X** is the mandatory separator character.

**NN** is the total number of media volumes within the exchange set.

For example, volume one of a three volume exchange set would be named **V01X03**.

PRIMAR does not split exchange set in the CD service, and uses only **V01X01**.

### 3 General ENC service information

#### 3.1 *ENCs in PRIMAR ENC services*

- All ENCs are compliant with the ENC Product Specification in the IHO S-57 Transfer Standard version 3.1/3.1.1
- All ENCs in the encrypted service are protected and digitally signed in compliance with the IHO S-63 Data Protection Scheme, and customer-specific permit files will be required to access the chart content.
- Only ENC provided by the national Hydrographic office will be available in the PRIMAR ENC services. The distributor is responsible for ensuring that access to other ENC data is limited to only national users, but agreements with other hydrographic offices can increase the ENC coverage.
- All ENCs in the PRIMAR service meet the International Maritime Organisation's (IMO) Safety of Life At Sea (SOLAS) chart and carriage requirements when kept up to date and used on a type-approved ECDIS with suitable backup.





#### 3.2 *PRIMAR ENC exchange set/CD content*

This exchange set is built up the same way independent of the service used – some differences appears in the dataset downloaded from PRIMAR web/ftp or downloaded using PRIMAR Online (also the permit files are included).

There is also a difference due to protection scheme used; if PRIMAR Security Scheme is used the exchange set will have the primar.crt file on the root level, if IHO security scheme is used the certificate file will be called IHO.CRT. This is defined when registration of the systems user permit.

Description of the directory structure on CDs delivered in the PRIMAR ENC service using PRIMAR Security Scheme is as follows:

**Root level (V01X01):**

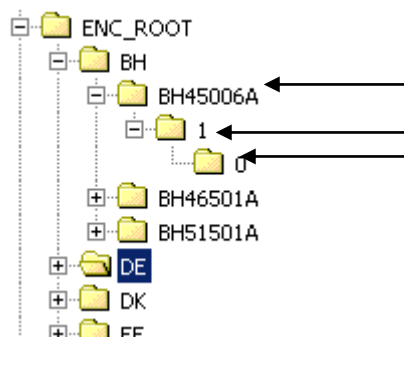
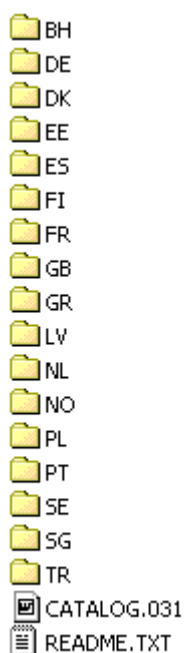
-  ENC\_ROOT
-  INFO
-  primar.crt
-  SERIAL.ENC

### 3.2.1 ENC\_ROOT folder

This folder consists of catalogues and files for:

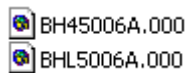
- country codes according to S-57 Appendix A – IHO Codes for Producing Agencies,
- CATALOG.031 file - which is a description of the content in this specific exchange set
- README.TXT file - consist of disclaimer and specific information, if any, from the countries that deliver ENCs.

Below you find an example of how this can appear, note that the country codes changes according to the data in the service:



In the country code a new folder for the name of the cell is stored, then a catalogue for indication of the edition number of this specific cell, and thereafter the next catalogue indicates if this is a base cell (0) or an update cell (>0).

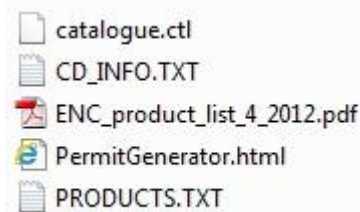
Then you get down to the file level:



The reason why two data set files are displayed is that this exchange set is encrypted. The file with the largest file size will normally be the ENC file, while the other file (with a letter instead of a number for navigational purpose) will contain the digital signature file.

### 3.2.2 INFO folder

This folder consists of a catalogue.ctl which can be imported into the PRIMAR Chart Catalogue – this is updated every week. The PRODUCTS.TXT file give information of all cells in the service such as: Catalogue version date, cell name, issue date edition number, ER issue date, ER number, Cell size and Cell limit, the same information is also found in the ENC\_product\_list.pdf. PermitGenerator.html gives you a link to the Permit Generator (read more in 4.1.3)



### 3.2.3 PRIMAR.crt

The PRIMAR digital certificate will always be provided in a file called primar.crt. It can be used by the end-user systems to obtain the PRIMAR public key required for authenticating the digital signatures.

The PRIMAR.crt file is stored directly under V01X01i.e. in the same level as ENC\_ROOT, INFO and serial.enc.

Certificates are digital files issued by a certification authority. They bind a specific public key together with other information to an individual or organisation. Certificates help prevent someone from using a phoney public key to impersonate someone else.

NOTE! If protection scheme signed by IHO is used, the certificate file will be IHO.CRT as described in 3.2.

### 3.2.4 SERIAL.ENC

The SERIAL.ENC file should be stored directly under V01X01i.e. in the same level as ENC\_ROOT, INFO and PRIMAR.CRT.

### Example of SERIAL.ENC file

PMWK11-07    20070314UPDATE    01.00

- Organisation of origin should usually be PRIMAR (PM). The Agency code for the organisation is obtained from S-57 ed. 3 Appendix A, Annex A – IHO Codes for Producing Agencies.
- The CD Number specifies the week and year that the CD is distributed, e.g., WK11-07
- Date of publication is a regular date format, YYYYMMDD, e.g., 20070314
- The CD is issued in two different formats:

**BASE.** The format should be defined as BASE, if the CD contain all EN and ER's.

**UPDATE.** The format should be defined as UPDATE, if the CD contains new (compared with previous CD) ENs and ERs

- Format version describes the version of the SERIAL.ENC file. The present version is 01.00

## 3.3 PRIMAR CD production plan

A yearly CD production plan is made available for planning on [www.primar.org](http://www.primar.org).

## 3.4 CD labeling/settings CD copying

### 3.4.1 PRIMAR Identity Program

CD labeling is required to be done according to PRIMAR Identity Program. The CD naming can also be used as guidance for PRIMAR Online users.

This is applicable when operating a PRIMAR CD service by;

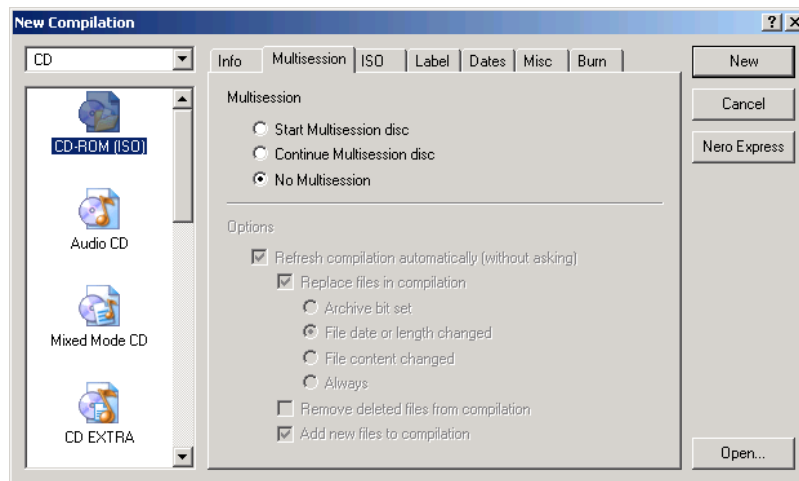
- copying received master CD
- download standard base or weekly CD using web or ftp
- using CD as a transfer medium for dataset downloaded in PRIMAR Online service where PRIMAR Chart Catalogue is used as a client.

Note! Base and Update CDs can also be ordered from PRIMAR.

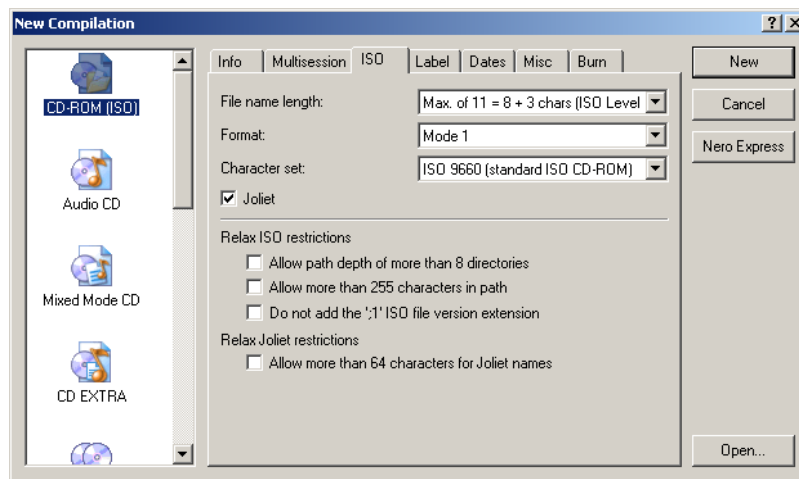
### 3.4.2 Settings

The following settings are used in PRIMAR when producing CDs and can be used as internal guidance when producing CDs or as guidance to users on PRIMAR Online service (using Nero burning room application):

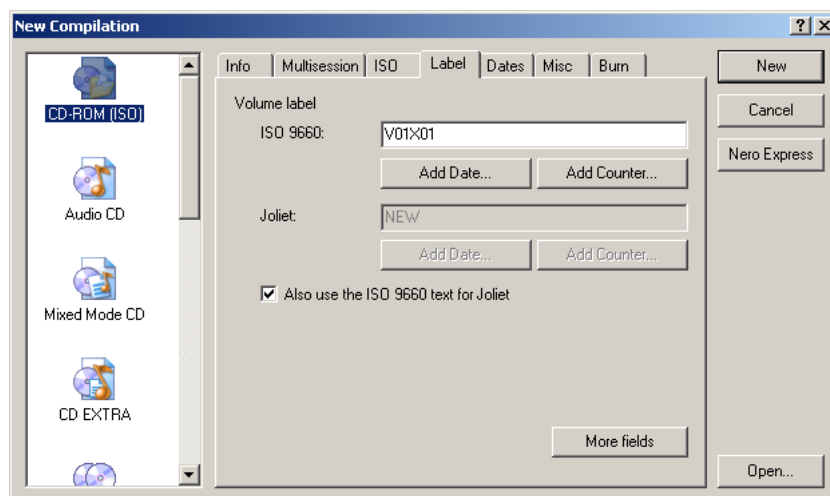
## Multi session



## ISO

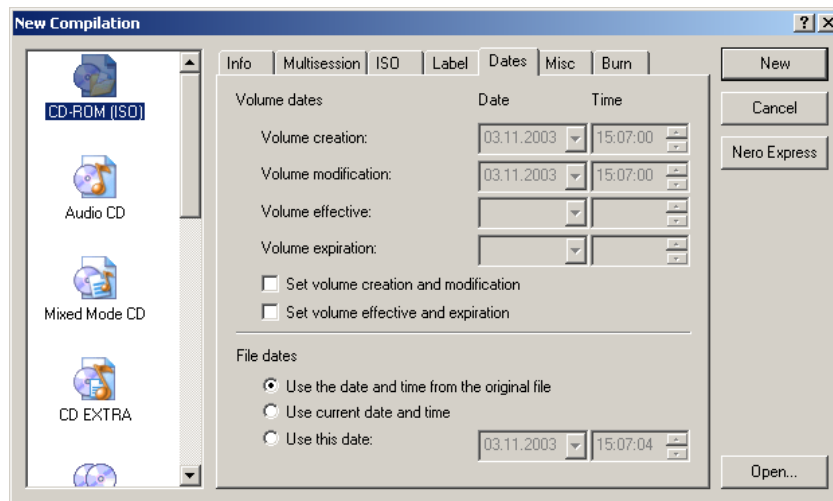


## Label

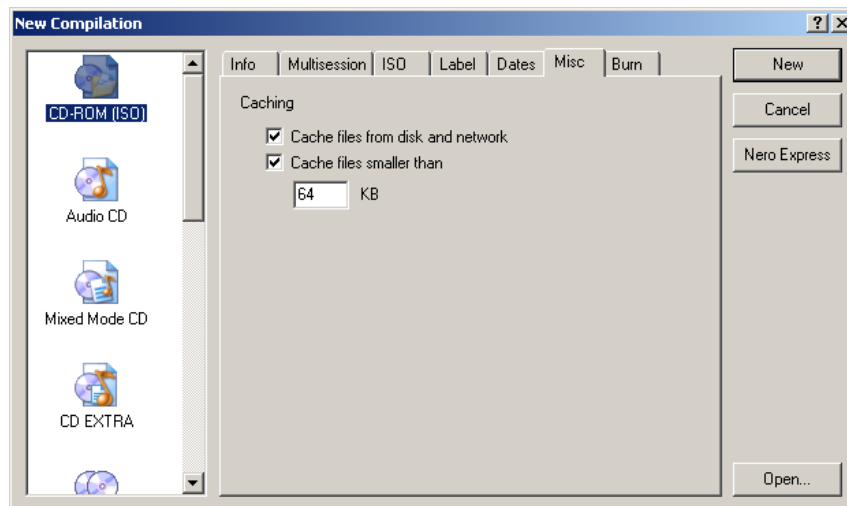




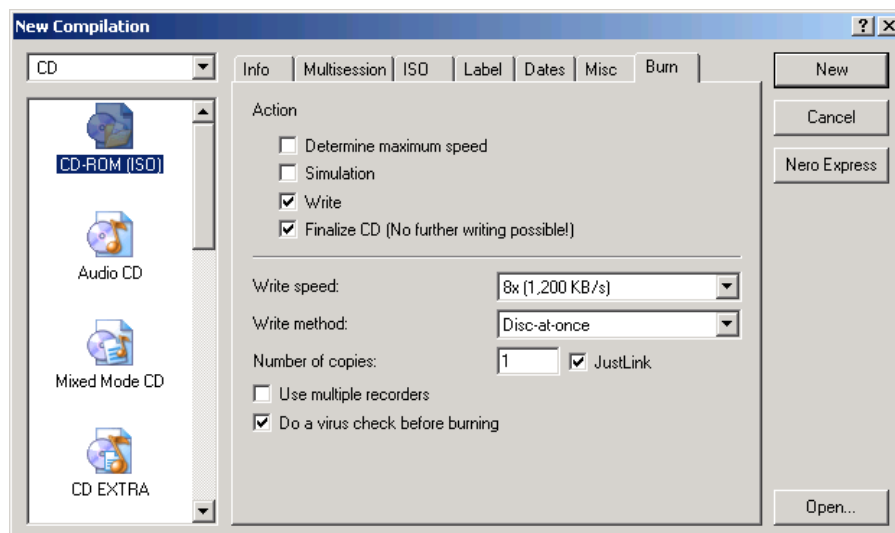
## Dates



## Misc



## Burn



### **3.5 *Products weekly file***

The Products Weekly file contains a list of all changes to the PRIMAR database each week, including new ENC's, new editions, updates and cell cancellations. A new file is created every week, and can be found on [www.primar.org](http://www.primar.org).

The Products Weekly file can be used by the distributor to get a textual overview of weekly changes (new ENC's, new editions, updates and cell cancellations).

### **3.6 *PRIMAR Cancel cell list***

At times the National Hydrographic Offices/data providers choose to cancel cells for various reasons. The complete list over cells that have been cancelled or replaced can be found on [www.primar.org](http://www.primar.org).

The cancel cell list can be used by the distributor to provide support to his users and inform about ENC cells that have been cancelled and which replacement cells have been issued.

### **3.7 *ENC subscription alternatives***

The subscription alternatives and pricing are described in agreements between NHS/PRIMAR and the ENC distributor.

### **3.8 *Auto-renewal e-mail in PRIMAR ENC services***

#### **3.8.1 *Renewal notification***

A renewal notification e-mail will be issued by PRIMAR to the distributor when an ENC subscription is about to expire. The e-mail will be issued one month before expiry.

The distributor must use functionality in the PRIMAR Chart Catalogue to stop auto renewal. If the distributor does not stop the renewal, the subscription will be automatically renewed.

Details regarding the renewal notification e-mail and how to activate/deactivate auto renewal can be found in PRIMAR Chart Catalogue user manual.

### **3.9 Permit e-mail in PRIMAR ENC services**

To be able to decrypt the ENC's delivered in the PRIMAR ENC CD service the user needs permit files, these files are delivered to the distributor by e-mail in the following situations:

#### **3.9.1 Order**

The order e-mail is a confirmation of the requested ENC's. The relevant permit files for this order are enclosed in the e-mail.

The e-mail also informs the distributor which CD's, both parts of base CD's needed & which weekly update CD, these permits can be used in relation to.

#### **3.9.2 Renewal order**

The renewal order e-mail is a confirmation of the renewal order. A renewal notification e-mail has been sent out 30 days prior to the licensee's expiry date. The relevant permit files for this order are enclosed in the e-mail. The e-mail also informs the distributor which CD's, both parts of base CD's needed & which weekly update CD, these permits can be used in relation to.

#### **3.9.3 Permits for weekly CD**

Permit e-mail to weekly CD is sent to the distributor when necessary due to newer editions of ENC's in the licensee's folio are available in the CD service.

The permit files received in the e-mails described, and CD's should be made available to all users of the CD/permit file service.

These files should be sent to the user together with the weekly CD to which they correspond (for users on ENC CD/permit service).

Permit files can also be downloaded using PRIMAR Permit Generator see 4.1.3.

Note! Distributor shall not distribute permit e-mail to users on PRIMAR Online service.

### **3.10 ENC permit files description and content**

Permits are made available during order, renewal order, when applicable in relation to PRIMAR weekly CD production or when downloading ENC exchange set using PRIMAR Online. Two permit files are attached to the e-mail or included or included

in the downloaded data set (PRIMAR online): enc.pmt and permit.txt. These two files need to be distributed to the end-user.

Every permit file contains decryption keys for two editions of a cell (current and next edition).

### 3.10.1 enc.pmt

Example of content in this file, and what the content means:

Cell Name	Expiry Date	Encrypted CK1	Encrypted CK2	Encrypted Check Sum
8 alpha/numeric chars	8 numeric chars	16 hex chars	16 hex chars	16 hex chars

BE5OOSTE20070420FFE1EE182CB58910FFE1EE182CB58910350AA5A2044A7E  
D2

### 3.10.2 permit.txt

Example of content in this file:

```
:DATE 20060927 09:49
VERSION 1
ENC
BE5OOSTE20070420FFE1EE182CB58910FFE1EE182CB58910350AA5A2044A7ED2,0,2,0,
DE41603020070420C70E1D942CEE89CBC70E1D942CEE89CB727BCF4BA77B2A07,0,4,0,
DE4210302007042074D87F53C7B3D9E874D87F53C7B3D9E89416702371C332BE,0,4,0,
:ECS
```

Where:

0 = subscription permit

**2 = edition issue number of the cell**

0 = reserved for future use

## 3.11 User permit

The 28-character code which uniquely identifies the equipment system the end-user will be using. Without this information, PRIMAR cannot generate any of the cell permits which allow the end-user to decrypt their ENC cells.

The manufacturer of the end-user's system will supply this code when the system is purchased.

### 3.12 Area of interest

Area of interest is a possibility for the distributor to get information about new ENC's available in specified areas for licensees. The new ENC's in the specified areas can also be automatically ordered if wanted.

#### 3.12.1 How to set area of interest

Log in as a central administrator in the PRIMAR Chart Catalogue

- A. Choose the user
- B. Open the licensee card
- C. Choose selected for area you want information from and auto order if you want the ENC in the selected area to be ordered automatically;

Name	Selected	Auto Order
Africa - Atlantic & Indian Ocean & R...	<input type="checkbox"/>	<input type="checkbox"/>
Australia & Western South Sea	<input type="checkbox"/>	<input type="checkbox"/>
Caribbean Sea & North West Atlantic	<input type="checkbox"/>	<input type="checkbox"/>
Central Indian Ocean & Persian Gulf	<input type="checkbox"/>	<input type="checkbox"/>
Mediterranean & Black Sea	<input type="checkbox"/>	<input type="checkbox"/>
North East Pacific	<input type="checkbox"/>	<input type="checkbox"/>

### 3.13 Export basket to other licensees

The purpose with this functionality is to export and order a user's folio to other users or customers.

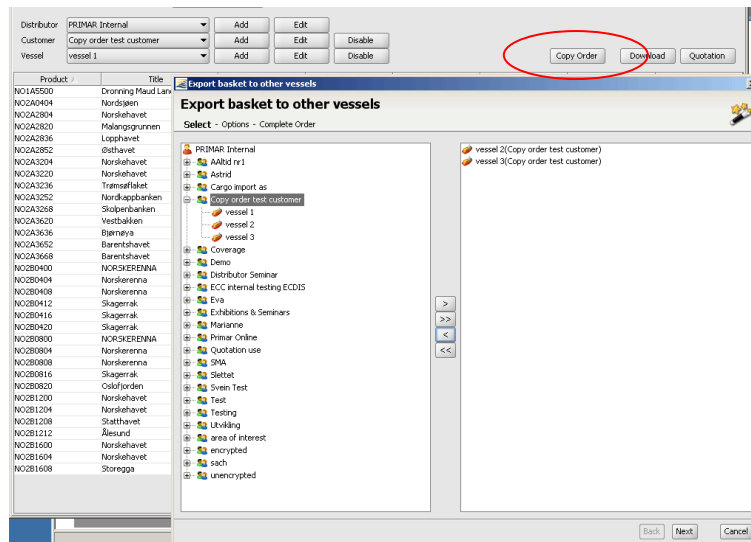
#### 3.13.1 How to copy order

Log in as a central administrator in the PRIMAR Chart Catalogue

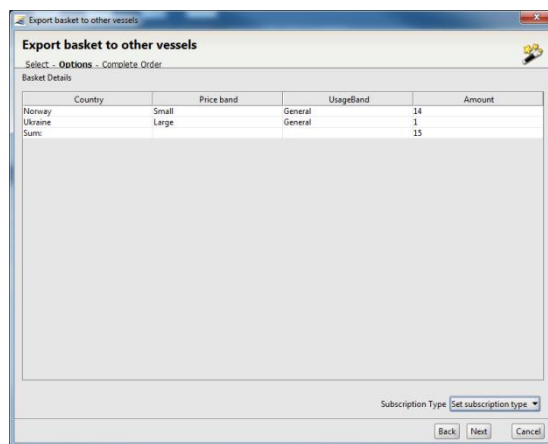
- A. Choose the user who has the folio you want to export
- B. Choose copy order

This will result in a list of all customers and users registered in your administration.

- C. From the list pick the customer or licensees to whom you will export the folio

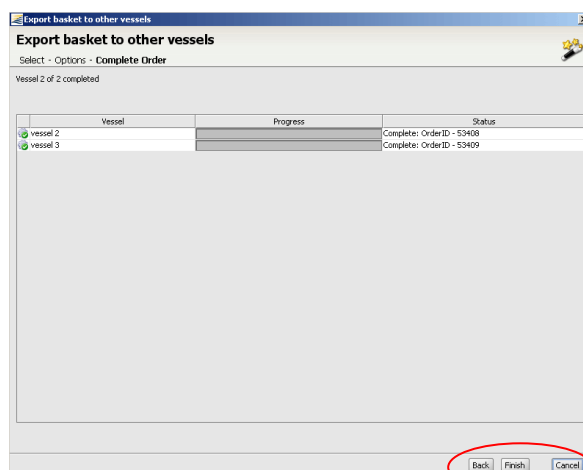


D. Choose next in the dialog box to continue with the quotation process for several users/customers. In the next dialog box the administrator will have the opportunity to set subscription type.



E. Continue with next and the order process will be done for all the users/customer.

F. Complete the process by pressing the finish button. Order e-mails will be processed.



## **4 PRIMAR ENC CD/permit service**

PRIMAR ENC CD/permit service is a service for the distributor to manage a users ENC portfolio.

The distributor manages all users and their ENC coverage using the PRIMAR Chart Catalogue.

Copies of PRIMAR Base and Update CDs downloaded from PRIMAR web or ftp must be distributed to all users.

In addition user specific permit files received on e-mail must be distributed.

### **Base CD**

The base CD set contains an encrypted copy of all ENCs available in the PRIMAR service. Several CDs are required for full coverage.

### **Update CD**

The update CD contains an encrypted copy of all updates, new editions and new ENCs issued since the last Base CDs. All updates are provided on a single CD.

### **ECDIS/ECS User Permit**

The User Permit is a 28 character code assigned uniquely by the system manufacturer to the ECDIS/ECS system. The ECDIS/ECS system manufacturer will provide a valid user permit for systems capable of handling encrypted ENCs.

The User Permit must be registered by the distributor using the PRIMAR Chart Catalogue to initiate delivery of a service to the user. It is used by PRIMAR when generating unique ENC permit files to the ECDIS/ECS.

### **ENC permit files**

Permit file contains the decryption key required to access and view the ENC. ENC permit files for a licensee using the CD service are sent by e-mail to distributor.

### **PRIMAR Chart Catalogue**

Provides user friendly functionality for customer/licensee registration and eases order management using a graphical shopping basket.

The PRIMAR Chart Catalogue gives the end-users the possibility to create an ENC shopping basket which can be forwarded to a distributor for order processing. It also provides flexible functionality for identifying new ENC information and impact on end-users ENC portfolios.

The distributor manages all internal users and their ENC coverage using the PRIMAR Chart Catalogue.

### **PRIMAR Permit Generator**

To harmonize CD and permit distribution a permit generator is available as a web tool on the distributed CDs.

By using this web interface the end user may download ENC permit files matching the current folio and either the received CD or a defined weekly CD.

## **How to operate the service**

### **4.1.1 PRIMAR Chart Catalogue**

PRIMAR Chart Catalogue is used to:

- Register new user
- Create basket files
- Maintain ENC coverage for each user
- Create new ENC permit files
- View orders/reports
- View licensee status
- Quotation and order ENC/ENC permit files

For detailed description of the functionalities and how to use the PRIMAR Chart Catalogue see PRIMAR Chart Catalogue user manual.

#### **How to register licensee details, and order ENC/ ENC cell permits using PRIMAR Chart Catalogue:**

1. Open the latest version of PRIMAR Chart Catalogue
2. Log in as distributor
3. Register/add customer
4. Register/add licensee details (for navy users numbers can be used to indicate licensee name)
5. Add ECDIS user permit (as received from the ECDIS manufacturer/user)
6. Create/import the users folio/or add/remove ENC/ENCs to an existing folio
7. Quotation
8. Set subscription type
9. Order ENC/ENC cell permit

### **4.1.2 Permit e-mail including ENC cell permits**

Permit e-mails are sent to the distributor when:

- order ENC/ENC cell permit
- renewal order
- changes in a users folio, in conjunction with weekly CD production

#### **Note!**

- Permit files are unique for each end-user and apply for a specific CD issue.
- Permit e-mails from PRIMAR includes information about end-user and CD issue.



- The distributor will receive periodic updates to ENC permits for relevant users if the ENCs in their coverage are made available in a new edition.

For detailed description of permit e-mail in PRIMAR ENC services see 3.10

#### **4.1.3 Download/send cell permits by using PRIMAR Permit Generator**

1. Open the weekly CD
2. Open the INFO folder
3. Click on the link Permit Generator for access to the web interface
4. Identify the licensee
5. Download (for licensee) or send (distributor) permit files.
6. You will receive a zip file including all permit files for the licensee chosen.
7. Install on the chart system (licensee) or distribute to your licensee (distributor)

#### **4.1.4 Download and label CDs**

Download the CDs using [www.primar.org](http://www.primar.org) or [ftp.primar.org](ftp://ftp.primar.org).

Distributor will be informed by e-mail when the base/weekly update CD is available for download.

##### **Example:**

*Dear,*

*The PRIMAR UPDATE CD week XX/XX is now available for download on [www.primar.org](http://www.primar.org) and <ftp://ftp.primar.org>.*

*Username and password when using ftp download:*

*Username:*

*Password:*

*The ECDIS/End-User system must be supplied with the latest BASE CD & WEEKLY UPDATE CD for their total chart portfolio to ensure that the user has the latest updated ENCs.*

*The relevant CDs should be copied and labeled according to the requirements of the PRIMAR Identity program.*

The distributor then:

1. Open [www.primar.org](http://www.primar.org) or [ftp.primar.org](ftp://ftp.primar.org).
2. Download the zipped file(s) or ISO file
3. Unzip the file to get a complete ENC exchange set
4. Do a quality control of the exchange set according to chapter 3.3
5. Burn the exchange set onto a CD
6. Label CD(s) according to the requirements of the PRIMAR Identity program.
7. Copy the CD(s) to your users

### 4.1.5 Distribution and user support

The user must be supplied with the latest BASE CD for their total chart portfolio and the latest WEEKLY UPDATE CD to ensure that the user has the latest updated ENC's.

Distributor must distribute to all users on the service:

- New versions of base CD to all users whenever they are produced (currently 4 times a year).
- Weekly update CD to all users.
- ENC permit files if applicable.

#### PRIMAR ENC CD/permit service

– distributor role, supply the user with following:

##### 1. Base CD

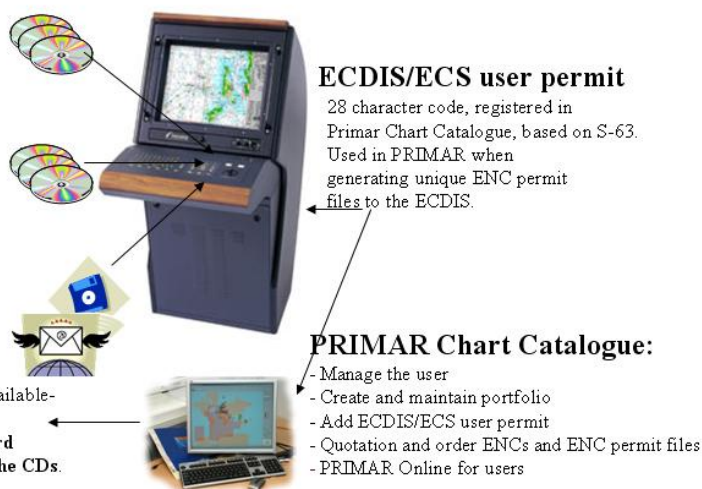
Contains a copy of all ENC's available in PRIMAR at the date for production.  
**Distribute when available.**

##### 2. Weekly Update CD

Contains all updates, new editions and new ENC's issued since the last Base CD.  
**Distribute weekly.**

##### 3. ENC permit files

ENC cell permit are sent by e-mail to the distributor when ordering of ENC's or when new editions/updates of an ENC is available in relation with weekly CD production.  
**Send the e-mail, or transfer the files to a hard copy and distribute to vessel together with the CDs.**



### 4.1.6 User responsibilities

**How the user installs ENC's delivered by the distributor:**

1. Install the permit files received from the distributor according to manufacturer procedures.
2. Install the Base CD received from the distributor according to manufacturer procedures.
3. Install the Update CD received from the distributor according to manufacturer procedures.

**Ongoing service instructions for the user when receiving new set of Base CDs or weekly Update CDs:**

1. Install the permit files received from the distributor (if any).
2. Install the Base/Update CD received from the distributor in accordance with manufacturer procedures (always).

**If permit files are not received one week, always install the weekly Update CD received from the distributor to update the existing folio.**

## 5 PRIMAR Online services

PRIMAR online service consists of the following service levels:

- ***PRIMAR Online using PRIMAR Chart Catalogue***
- ***PRIMAR Online using e-mail notification***
- ***PRIMAR Online using ECDIS/ECS***

### 5.1 PRIMAR Online using PRIMAR Chart Catalogue

PRIMAR Online is an internet-based service for maintaining a licensee's ENC portfolio. It gives users direct access to the PRIMAR ENC database, with delivery of all updates, new editions and permit files issued to the user's ENC coverage, by using PRIMAR Chart Catalogue as a client.

#### **PRIMAR Chart Catalogue**

Provides user friendly functionality for customer/licensee registration and eases order management using a graphical shopping basket.

The PRIMAR Chart Catalogue gives the end-users the possibility to create an ENC shopping basket which can be forwarded to a distributor for order processing. It also provides flexible functionality for identifying new ENC information and impact on end-users ENC portfolios.

The distributor manages all users and their ENC coverage using the PRIMAR Chart Catalogue. He will also use the application to activate the PRIMAR Online service for his users.

The PRIMAR Chart Catalogue contains a licensee status report showing the latest chart update date of all the licensees. The distributor is responsible of monitoring and ensuring that the licensees are using the service.

Each user will use the PRIMAR Chart Catalogue to access the PRIMAR ENC Online service. All relevant ENCs and ENC permit files will be transferred to the user's PC.

#### **ECDIS/ECS User Permit**

The User Permit is a 28 character code assigned uniquely by the system manufacturer to the ECDIS/ECS system. The ECDIS/ECS system manufacturer will provide a valid user permit for systems capable of handling encrypted ENCs.

The User Permit must be registered by the distributor using the PRIMAR Chart Catalogue to initiate delivery of a service to the user. It is used by PRIMAR when generating unique ENC permit files to the ECDIS/ECS.

#### **Base CD**

In addition, copies of PRIMAR **Base CD** are downloaded from PRIMAR web or ftp, and distributed to all users of this service.

## How to operate the service

### 5.1.1 PRIMAR Chart Catalogue

PRIMAR Chart Catalogue is used to:

- Register new user
- Create basket files
- Maintain ENC coverage for each user
- View orders/reports
- View licensee status/ Monitor the licensee using the service
- Quotation and order ENCs
- Set up a local database (user)
- Download ENC updates and permit files (user)

For detailed description of the functionalities and how to use the PRIMAR Chart Catalogue see PRIMAR Chart Catalogue user manual, note the chapter “*How to activate PRIMAR online and support a licensee*”.

#### How to register licensee details and order ENCs using PRIMAR Chart Catalogue:

1. Open the latest version of PRIMAR Chart Catalogue
2. Log in as distributor
3. Register/add customer
4. Register/add user details
5. Add ECDIS user permit (as received from the ECDIS manufacturer/user)
6. Create/import the end-users folio/or add/remove ENCs to an existing folio
7. Quotation
8. Set subscription type
9. Order ENC

### 5.1.2 Download and label CDs

Download the **BASE CDs** using [www.primar.org](http://www.primar.org) or [ftp.primar.org](ftp://ftp.primar.org).

Distributor will be informed by e-mail when the base/weekly CD is available for download.

The distributor then:

1. Open [www.primar.org](http://www.primar.org) or [ftp.primar.org](ftp://ftp.primar.org).
2. Download the zipped file(s) or ISO file(s), (all parts of the Base CDs)
3. Unzip the files to get complete ENC exchange sets
4. Do a quality control of the exchange set
5. Burn the exchange set onto CDs (one exchange set per CD)
6. Label CD(s) according to the requirements of the PRIMAR Identity program.
7. Copy the CD set to your users

### 5.1.3 Distribution and user support

The PRIMAR distributor must:

- Describe to the user how to open the PRIMAR Chart Catalogue, and how to login to the PRIMAR Online service (the information is found in PRIMAR Chart Catalogue user manual).
- Distribute the PRIMAR Chart Catalogue User Manual (Note the chapter: PRIMAR Online – ENC updating service for licensees.)

Latest versions of the mentioned documents will always be found on [www.primar.org](http://www.primar.org)

*Users of PRIMAR Online do not need **update** CDs or **permits** from the distributor.*

Distributor must distribute:

- **BASE CDs** to all users whenever they are produced by PRIMAR.

#### PRIMAR online

– distributor role, supply the user with following:

##### 1. Base CD

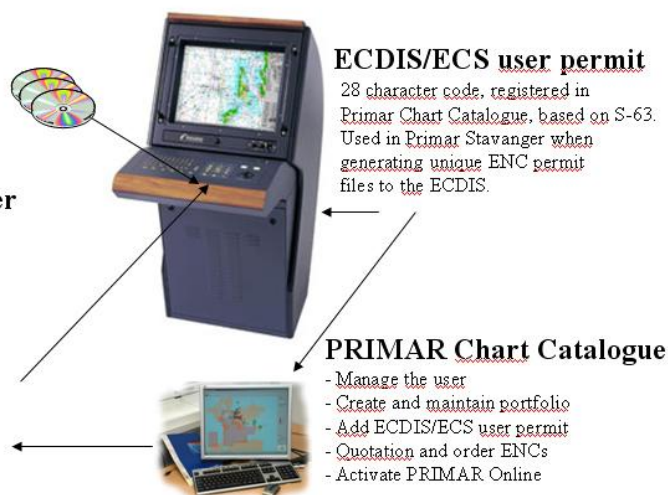
Contains a copy of all ENC's available in PRIMAR at the date for production. **Distribute when available.**

##### 2. Information to the end user

The distributor is responsible for informing the customer of the service and to distribute the Primar Chart Catalogue user manuals and guides.

##### 3. User (ENC updates)

ENC cells and ENC permit files are downloaded by the user using the PRIMAR Chart Catalogue. The ENC exchange set and ENC permit files are then transferred to the ECDIS/ECS



### 5.1.4 Information to the end user

The distributor informs the end user of the service, and distributes necessary information for installation of the PRIMAR Chart Catalogue application and its user manual and guides.

### 5.1.5 End-user tasks

Installation of the PRIMAR Chart Catalogue, see [www.primar.org](http://www.primar.org) for latest version and instructions.

For detailed description of the functionalities and how to use the PRIMAR Chart Catalogue see PRIMAR Chart Catalogue user manual, **note the chapter “PRIMAR Online – ENC updating service for licensees”**.

When an ENC is ordered by the distributor and has the status valid it is available for the user to download using PRIMAR Online.

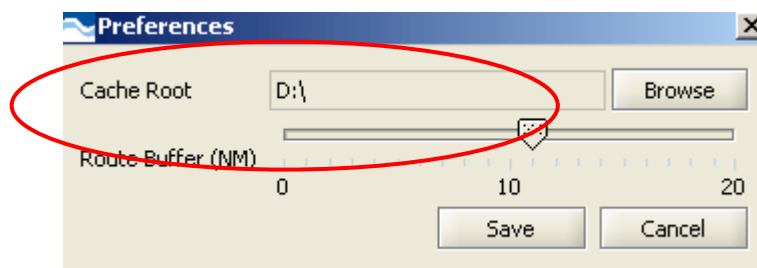
#### Set up a local database

##### Local cache:

First time a file is downloaded using this service it will be stored both in ENC Root and Cache Root. Second time this file is needed in an exchange set, the local version in Cache Root will be copied to ENC Root, if not the central version of the file has been modified.

Cache Root must point to a folder with at least 2 GB of free disk space. The files in this folder shall not be used directly by end user, only as a local storage for the Chart Catalogue application itself. The files will be stored with cryptic filenames to avoid file name conflicts. If the 2 GB limit of disk space is reached, the Chart Catalogue will delete the files that have been inactive for the longest period.

##### File – Preferences:



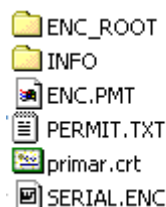
The files stored in the specified cache root folder will look like this:

_primar_1fa6f2083d2a5c1cd65e06b80a0012e24a5a03ef.cache	3 KB	CACHE File
_primar_2f32de8cecff5d1d86818564e20b5d9e931e872e.cache	1 KB	CACHE File
_primar_3aaa150b07312d9f41c6ba50deae8e6de8c863eb.cache	5 KB	CACHE File
_primar_6a03b04d43ad42a37319859fce69bc80b6993ee1.cache	1 KB	CACHE File
_primar_6c448257ee9c8382e2508ce6748585e139f666ab.cache	7 KB	CACHE File
_primar_06e057d3654de9944956d96de14eb7877e642d41.cache	96 KB	CACHE File
_primar_7e658da21ea5756c063fb3e20b013bccdad37242.cache	3 KB	CACHE File

Note! These files are only for internal use, and must never be installed in the ECDIS/ECS.

## How the user downloads and installs ENC's from PRIMAR

1. Install the PRIMAR Chart Catalogue from web or the Base CD on your PC.
2. Log into PRIMAR Online using the ECDIS/ECS user permit in the PRIMAR Chart Catalogue.
3. Download ENC updates and permit files in accordance with the ECDIS/ECS Base CD status. The following image describe the download result:



4. Install the downloaded permits on the ECDIS/ECS (enc.pmt and permit.txt).
5. Install the Base CDs received from distributor on the ECDIS/ECS.
6. If the user's ECDIS/ECS and PRIMAR Chart Catalogue are installed on different PC's, the ENC and ENC permit files must be transferred using e.g. a network, CD, USB flash drive etc.
7. Install downloaded ENC exchange set on the ECDIS/ECS.

## Updating of your ENC folio (recommendation weekly)

1. Log into PRIMAR Online using the ECDIS/ECS user permit in the PRIMAR Chart Catalogue.
2. Download ENC updates/new ordered ENC's and permit files in accordance with the ECDIS/ECS Base CD status.
3. If the user's ECDIS/ECS and PRIMAR Chart Catalogue are installed on different PC's, the ENC and ENC permit files must be transferred using e.g. a network, CD, USB flash drive etc.
4. Install the downloaded permits on the ECDIS/ECS.
5. Install downloaded ENC exchange set on the ECDIS/ECS.

## Ongoing service instructions to the end user when receiving new Base CDs

1. Download updates and permit files in accordance with the available Base CD.
2. Install downloaded permits in the ECDIS/ECS.
3. Install the Base CD received from distributor in the ECDIS/ECS.
4. If the user's ECDIS/ECS and PRIMAR Chart Catalogue are installed on different PC's, the ENC and ENC permit files must be transferred using e.g. a network, CD, USB flash drive etc.
5. Install downloaded ENC exchange set in the ECDIS/ECS.



### 5.1.6 Backup procedures for distributor

If the user reports an error when trying to connect to the PRIMAR Online service, or is unable to install the downloaded exchange set or permit files on their ECDIS/ECS:

1. Verify that the customer has a working internet connection.
2. Verify that the customer has installed the latest version of the PRIMAR Chart Catalogue.
3. Verify that the licensee user permit registered in the PRIMAR Chart Catalogue is identical with the licensee user permit installed on the ECDIS.
4. Verify that the customer has correctly configured all the parameter settings as described in the *PRIMAR Chart Catalogue User Manual*.
5. Ask the user for a java log, according to description below, and send this log to [sales@primar.org](mailto:sales@primar.org) for further investigation.

#### Java logging:

##### Using PRIMAR Chart Catalogue online version

(Installed from PRIMAR web site)

Go to Start à Settings à Control Panel à Java, and select Advance à Java Console à Show Console. Re-start PRIMAR Chart Catalogue and start PRIMAR Online download. Copy/Paste the messages written in the Java Console window and send to your distributor.

##### Using PRIMAR Chart Catalogue offline version

(Installed from a PRIMAR CD or another medium delivered by your distributor or from the PRIMAR web site “PRIMAR Chart Catalogue <version no.> offline version.”)

Open a dos shell. Go to start à Run à type “cmd” and a dos shell will open.

Go to the folder where the PRIMAR Chart Catalogue is installed. (Where you can find the file cc.jar). Example: c:\program files\chart catalogue\  
Use the following command to start the chart catalogue: java -Xmx200M -jar cc.jar  
Start PRIMAR Online download. Copy/Paste the messages written in the dos shell window and send to your distributor.

#### Should the error/failure persist, adopt one of these two options:

##### 1. Use the PRIMAR Online service as distributor

1. Log onto PRIMAR Online using the licensee’s user permit.
2. Download an exchange set based on information from the user about which Base CD is installed on the ECDIS/ECS.
3. Burn the exchange set and permits files to a CD.
4. Deliver the new CD to the customer.



## **2. Use PRIMAR CD service support**

Use the PRIMAR Chart Catalogue to run a quotation and order new permits for the customer, and deliver the latest Base, Update CDs and the permit files received to them.

Alternatively, should your customer have an internet connection and sufficient bandwidth, they can download the latest Base or Update CD from the PRIMAR web site.

### **5.2 PRIMAR Online using e-mail notification**

#### **How to operate the service**

##### **5.2.1 PRIMAR Chart Catalogue**

PRIMAR Chart Catalogue is used to:

- Register new user
- Create basket files
- Maintain ENC coverage for each user
- View orders/reports
- View licensee status/ Monitor the licensee using the service
- Quotation and order ENC's
- Register e-mail details to the licensee in the licensee card
- Activate PRIMAR Online e-mail notification to a licensee

#### **Activate PRIMAR Online e-mail notification for a licensee:**

1. Log in as distributor
2. Open the users "licensee card"
3. Tick "✓" for PRIMAR Online e-mail notification, the service is now activated

##### **5.2.2 End-User tasks**

The End-User must download the ENC dataset which includes permit files using a web interface.

The specified receiver will regularly receive an e-mail;

*Dear*

*"LICENSEE, CUSTOMER or DISTRIBUTOR"*

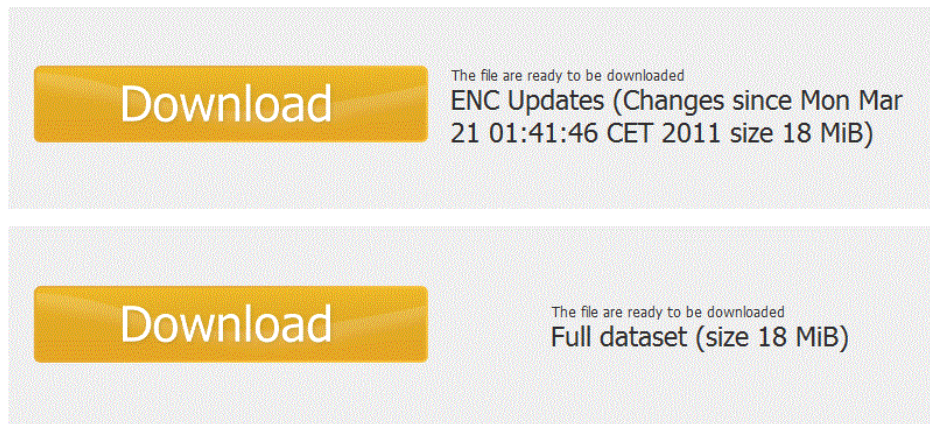
*ENC updates and belonging permits, according to your ENC license are now available.*

*Please use the following link to enter web page for download:*

<https://services.ecc.as/qastable/vexport/37c28a22-5807-491d-a206-662b7378ed5a>

Your ENC distributor “NAME OF DISTRIBUTOR”

By choosing the link, the user will enter a web page where an update dataset and/or a full dataset including permit files for the licensee will be available for download:



1. Choose download
2. Browse to an area on your computer to store the zip file
3. Unzip the downloaded file
4. Permit files for the licensee is found in the INFO folder
5. Install the permit files and the ENC data set in the ECDIS/ECS

### **5.2.3 Backup procedures for the licensee**

If the End-User experiences any problems with the downloaded update dataset or have had a breakdown in the ECDIS/ECS a full ENC dataset will always be available for download.

### **5.3 PRIMAR Online using ECDIS/ECS**

In this service the End-User have functionality in their ECDIS/ECS to directly interface and download ENC's and ENC permit files from PRIMAR.

Manufacturers can contact PRIMAR to receive copies of relevant interface protocols. The protocols support deliveries using http and e-mail communication.

Each licensee uses functionality in the ECDIS/ECS for updating its portfolio of ENC data.

## **6 PRIMAR B2B Service**

PRIMAR B2B Service integrates a distributor's business systems with PRIMAR ENC Service.

The secure interface is designed to support online customer & licensee registration and management. It facilitates online quotations, ENC ordering, and the delivery of cell permits.

Sales transactions with your customers and ordering processes with PRIMAR can now be integrated into a single service system controlled by the distributor.

#### **Benefits of using the PRIMAR B2B Service:**

- Direct access to the PRIMAR ENC Service
- Generate orders from your own system
- Enhance the operational efficiency
- Save time and resources
- Cost reduction
- Efficient ENC & permit ordering
- Increased customer service

## **7 PAYS**

Our innovative distribution solution, Pay as you sail service (PAYS), allows PRIMAR ENC's to be passively installed on a navigation system.

The service ensures that the user has immediate access to worldwide ENC coverage in the event of re-routing for operational or contingency reasons. The ENC's can also be freely viewed and accessed for planning purposes. Distributors are required to establish a mechanism which accurately registers all use of ENC's accessed during navigation, and which transmits this information automatically to PRIMAR.

Read more about the service and find our Pay As You Sail Specification on [www.primar.org](http://www.primar.org).